

## POWER SECTION

**Model No: AT475784.5 SX**

Revised: 9/22/2020

Rotor Specifications	
	inches
Overall Length	220.00
Contour Length	214.30
Major Diameter	3.091
Eccentricity	0.172
Head diameter	2.750
Thread Form	2.375 HEF Modified
Weight	381 lbs
Material	17-4 PH <sup>1</sup>

Stator Specifications	
	inches
Overall Length	229.25
Tube OD	4.75
Tube ID	3.75
Rubber Cutback Top/End	8.00 / 12.00
Weight	396 lbs
Number of Stages	4.5
Tube Material	4140/4142 Alloy Steel
Rubber Options	NBR-HPW & NBR-HPO

NBR-HPW (in)		Fits (+ Compression / - Loose)				
Size	Minor <sup>2</sup>	75 °F	125 °F	175 °F	250 °F	300 °F <sup>3</sup>
.5 US						
STD	2.746	0.002	0.015	0.028	0.048	0.062
.5 OS						
1.0 OS	2.766	-0.018	-0.005	0.008	0.028	0.041
1.5 OS						
2.0 OS						
2.5 OS						

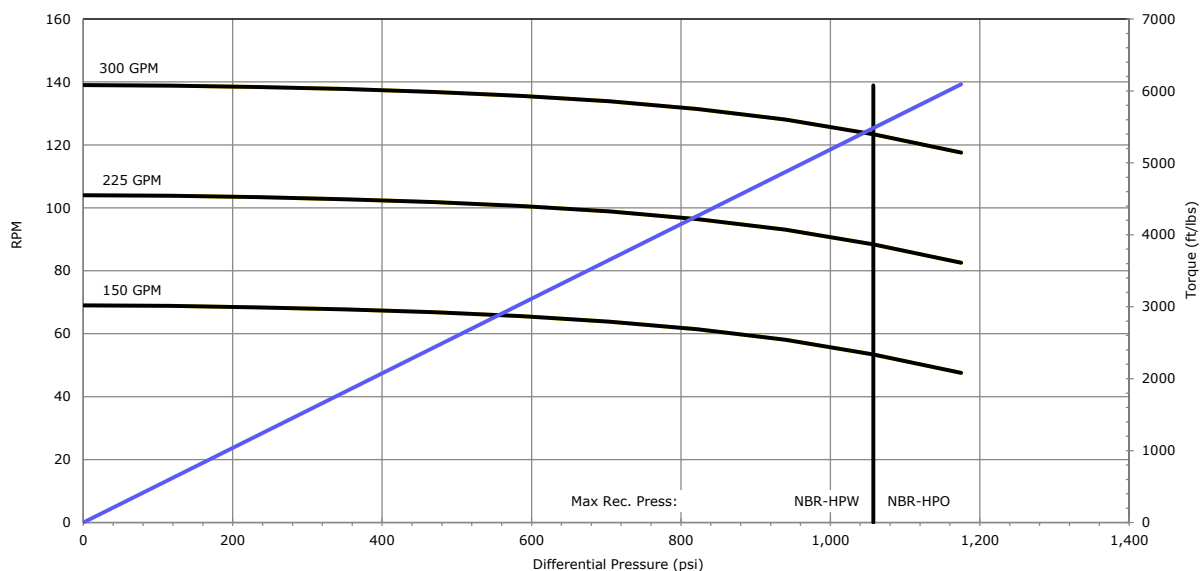
NBR-HPO (in)		Fits (+ Compression / - Loose)				
Size	Minor <sup>2</sup>	75 °F	125 °F	175 °F	250 °F	300 °F <sup>3</sup>
.5 US						
STD	2.746	0.002	0.015	0.028	0.048	0.062
.5 OS						
1.0 OS	2.766	-0.018	-0.005	0.008	0.028	0.041
1.5 OS						
2.0 OS						
2.5 OS						

Performance Specifications	
Flow Range (gpm)	150 - 300
Speed Range (rpm)	70 - 140
Torque Slope (ft-lb/psi)	5.19
Rotation (rev/gal)	0.463
Off Bottom Pressure (psi)	60

Performance Details		NBR-HPW	NBR-HPO
Max Diff Press (psi)		1060	1060
Stall Diff Press (psi)		1670	1670
Max Torque (ft-lb)		5490	5490
Stall Torque (ft-lb)		8640	8640

■ (NBR-HPW/HPO)

■ Torque



<sup>1</sup> Coating options of chrome or tungsten carbide are available <sup>2</sup> Vector Gauge Readings at Room Temp 75°F <sup>3</sup> BHCT Exceeding 320°F will void warranty for NBR-HPW/HPO.

Performance curves are based on new rotor and stator dimensions and for reference only. Actual performance may vary depending on fit and drilling conditions. The stall torque may exceed that specified for the connected components. Operating over the recommended limits may result in damage to the power section and connected components. Please visit [www.AbacoDrilling.com](http://www.AbacoDrilling.com) for the latest specification revisions.

### LOCATIONS

US: Headquarters	713 Northpark Central Dr., #400 Houston, TX 77073 - Tel: (281) 869-0700 - Fax: (281) 869-0701
US: Sales & Distribution	11308 West Interstate 20 East, Odessa, TX 79765 - Tel: (432) 248-1814
CANADA: Stator Manufacturing	6303-39th Street Leduc, Alberta T9E 0Z3 Canada - Tel: (780) 986-8947 - Fax: (780) 986-8842
DUBAI UAE: Stator Manufacturing	Oilfields Supply Center B#57, Jebel Ali, Dubai UAE, P.O. Box 19909 - Tel: 971-4-870-8600

## POWER SECTION - METRIC

**Model No: AT475784.5 SX**

Revised: 9/22/2020

Rotor Specifications	
	mm
Overall Length	5588.0
Contour Length	5443.2
Major Diameter	78.51
Eccentricity	4.36
Head diameter	69.85
Thread Form	2.375 HEF Modified
Weight	173 kg
Material	17-4 PH <sup>1</sup>

Stator Specifications	
	mm
Overall Length	5823.0
Tube OD	120.7
Tube ID	95.3
Rubber Cutback Top/End	203.0 / 305.0
Weight	180 kg
Number of Stages	4.5
Tube Material	4140/4142 Seamless Alloy Steel
Rubber Options	NBR-HPW & NBR-HPO

NBR-HPW (mm)		Fits (+ Compression / - Loose)				
Size	Minor <sup>2</sup>	25 °C	75 °C	100 °C	125 °C	150 °C <sup>3</sup>
.5 US						
STD	69.75	0.05	0.66	0.96	1.26	1.56
.5 OS						
1.0 OS	70.26	-0.46	0.14	0.44	0.73	1.03
1.5 OS						
2.0 OS						
2.5 OS						

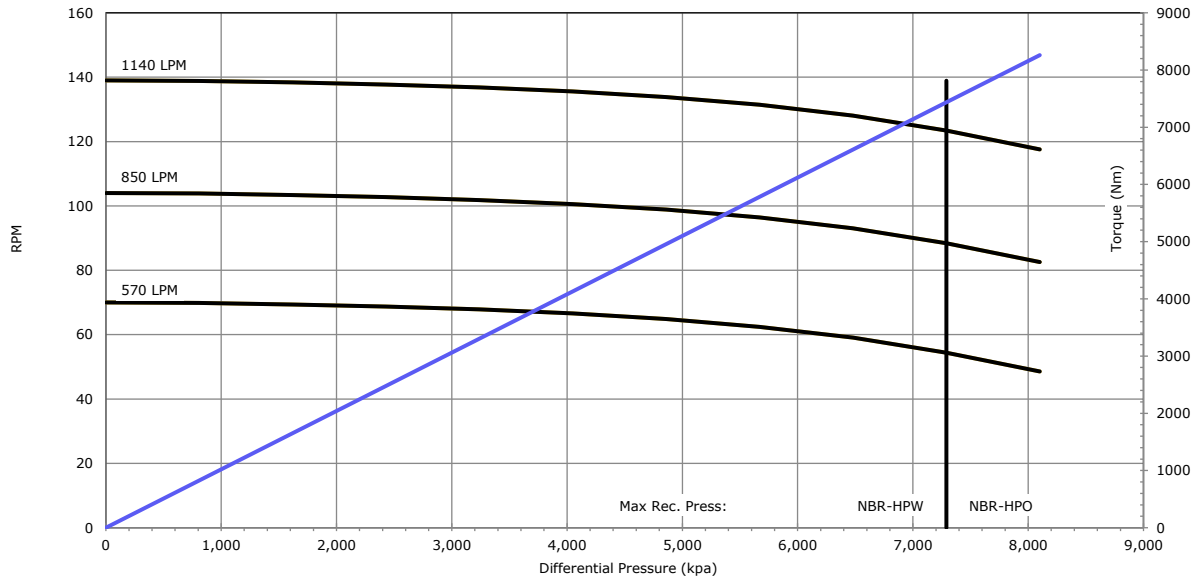
NBR-HPO (mm)		Fits (+ Compression / - Loose)				
Size	Minor <sup>2</sup>	25 °C	75 °C	100 °C	125 °C	150 °C <sup>3</sup>
.5 US						
STD	69.75	0.05	0.66	0.96	1.26	1.56
.5 OS						
1.0 OS	70.26	-0.46	0.14	0.44	0.73	1.03
1.5 OS						
2.0 OS						
2.5 OS						

Performance Specifications	
Flow Range (lpm)	570 - 1140
Speed Range (rpm)	70 - 140
Torque Slope (Nm/kpa)	1.02
Rotation (rev/Liter)	0.1223
Off Bottom Pressure (kpa)	430

Performance Details		
	NBR-HPW	NBR-HPO
Max Diff Press (kpa)	7300	7300
Stall Diff Press (kpa)	11500	11500
Max Torque (Nm)	7500	7500
Stall Torque (Nm)	11800	11800

■ (NBR-HPW/HPO)

■ Torque



<sup>1</sup> Coating options of chrome or tungsten carbide are available <sup>2</sup> Vector Gauge Readings at Room Temp 25°C <sup>3</sup> BHCT Exceeding 160°C will void warranty for NBR-HPW/HPO.

Performance curves are based on new rotor and stator dimensions and for reference only. Actual performance may vary depending on fit and drilling conditions. The stall torque may exceed that specified for the connected components. Operating over the recommended limits may result in damage to the power section and connected components. Please visit [www.AbacoDrilling.com](http://www.AbacoDrilling.com) for the latest specification revisions.

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